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## ABSTRACT

This study compared the factors of library anxiety in 23 upper level history and 24 physical education majors. The Library Anxiety Scale (LAS) was administered. This scale measures the five factors of library anxiety: barriers with staff, affective barriers, comfort with the library, knowledge of the library, and mechanical barriers. A t-test was run to measure the difference in the level of anxiety experienced by both groups. The t-statistic was -2.554, which is a statistically significant difference. A series of algorithms was performed for each factor for both groups allowing a study of the individual factor responses. Implications are discussed, and suggestions for future research are made. Appendixes contain 30 charts and graphs, the LAS, a table of factor values by factor, and letters used in the study. (Contains 39 references.) (Author/SLD)

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# A Study of Library Anxiety in History and Physical Education Majors

ED 482 508

Joyce A. Brannan  
Submitted in partial fulfillment of the requirements for  
The degree of Master of Library and Information Sciences  
University of Southern Mississippi  
Hattiesburg, Mississippi  
Spring 2003

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# ABSTRACT:

This study compares the factors of library anxiety in 23 upper level history and 24 physical education majors. The Library Anxiety Scale (LAS) was administered. This scale measures the five factors of library anxiety, barriers with staff, affective barriers, comfort with the library, knowledge of the library, and mechanical barriers. A T-Test was run to measure the difference in the level of anxiety experienced by both groups. The T-stat was  $-2.554$ , which is a statistically significant difference. A series of algorithms was performed for each factor for both groups allowing a study of the individual factor responses. Implications are discussed and suggestions for future research are made.

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## Chapter one

### Introduction:

At some point in every college student's academic experience, a visit to the library will be required. As papers are assigned and research is found necessary, the library is discovered to be the source of the reference materials and the repository of knowledge necessary to supplement the classroom environment. University libraries have focused on providing bibliographic instruction both in a classroom setting and as individual assistance to those students to come into the library and ask for help. However, some students avoid the library. It is not uncommon for a student in his senior year to say something to the effect, "I've never been in the library before." By avoiding the library, these students have not made the most of their learning potential and probably have not achieved the highest grade of which they are actually capable. Before librarians can devise ways to find and help these students, it would be helpful to determine why they are not using the library.

Library anxiety has been found to be a contributing cause of students not using the library. Library anxiety is a generalized feeling of tension and apprehension experienced by a person when either actually using or anticipating having to use an academic library. This anxiety can occur at the level of a phobia. Constance Mellon was the first to name this phenomena 'library anxiety' (Mellon, 1988).



**Problem:**

Students majoring in physical education and athletic training use the library less often than other groups of university students. History majors have a high usage of the library. The purpose of this study was to discover what differences, if any, exist in the frequency of occurrences and in the types of library anxiety that occur in physical education and athletic training majors as compared to history majors in a small southern university.

**Subproblems:**

1. How often does library anxiety occur in history majors?
2. How often does library anxiety occur in physical education and athletic training majors?
3. What kinds of library anxiety occur in history majors?
4. What kinds of library anxiety occur in physical education majors?

**Hypothesis:**

Students in both areas experience the same kinds of library anxiety, but physical education majors experience library anxiety more frequently than history majors experience library anxiety.

**Assumptions:**

1. Some students do experience some degree of library anxiety.
2. Students will answer the questionnaires honestly.

3. Faculty members will cooperate and allow the LAS to be given during their class periods.
4. Students are able to read and comprehend English.

**Limitations:**

1. Only library anxiety was measured.
2. Only students majoring in physical education and athletic training and history were asked to participate.
3. Only students having completed at least two years of college were asked to participate.

**Definitions:**

Academic library - a library that serves the needs of a college or university body of students and faculty.

Affective barriers – attitudes and feelings toward self, which affect student behavior.

Barriers with staff – any experience with or perception of librarians and library staff that affects student behavior.

Bibliographic instruction - Formal teaching of library skills and information search strategies.

Circulation services - lending of materials for use outside the library.

Comfort with the library - feelings of physical comfort and safety while in the library.

Fines - money charged as penalties for returning materials late or damaged.

Interlibrary loan - the service of lending materials to or borrowing materials between libraries.

Librarian - professional faculty and staff of a library.

Library anxiety - a generalized feeling of tension or apprehension experienced by a student when either actually using or anticipating having to use an academic library.

Knowledge of the library – skills in using the library information resources.

Mechanical barriers – lack of skill in using library computers and other equipment.

State anxiety - a conscious awareness of anxiety that varies in intensity and the occurrence of which is dependent on situations (Mech and Brooks, 1995).

Trait anxiety - a generalized tendency toward anxiety experienced by some people in many areas of their lives (Mech and Brooks, 1995).

Work-study students - student employees of the library. These students are generally used to assist the work of the librarians.

### **Importance of the study:**

Many areas of library anxiety and its contributing factors have been studied. However, no research comparing library anxiety as it occurs in students in different areas of majors have been done. With a better understanding of how library anxiety is experienced in different parts of a student population, libraries may be able to custom design programs that better fit the needs of the students.

## **Chapter Two:**

### **Review of Literature**

#### **Introduction**

A review of the literature pertaining to library anxiety was conducted.

The Publication Manual of the American Psychological Association (APA), fifth edition, was used for citations and the bibliography.

#### **Review**

While working with college freshmen in bibliographic instruction at a small university in Tennessee, Constance Mellon became aware that some students were so uncomfortable using the library that their experience was similar to a phobia. Mellon designed a study with the cooperation of the English instructors, in which students during a two-year period, kept a journal that included an essay about their first experience in using the college library. These were then analyzed for indications of library anxiety and reasons for the anxious feelings. Mellon found that approximately 75 – 85% of the students experienced some degree of anxiety when they needed to use the library for research. She also found that four common problems seemed to be the source of these feelings: size of the library, not being familiar with where things were within the library, lack of library skills, and lack of research skills. In addition, students felt that they were incompetent in library use as compared to other students, that this was “shameful,” and that they should not reveal their inadequacies. (Mellon, 1988).

Mech and Brooks (1995) conducted a study in 1994 using the forty-item State-Trait Inventory together with several questions specially addressing library situations to try to determine if LA was a separate and distinct form of anxiety or if it occurred as a part of generalized anxiety. The State Trait Anxiety Inventory is an accepted test used by the psychological community for testing of anxiety (Dreger and Katkin, 1978). They found that LA was separate and distinct from state-trait anxiety. This study tabulated the results by academic classification. The results showed that LA was significantly reduced from the freshman year to the senior year. This had an inverse correlation with confidence in using the library. One-third of the freshmen felt unsure of themselves and that libraries were intimidating places. However, less than four percent of the seniors had similar feelings (Mech and Brooks, 1995).

Qun G. Jiao and Anthony J. Onwuegbuzie (1999a) conducted a study to determine what degree of correlation might exist between library anxiety and other trait anxiety. It had been suggested that those students experiencing library anxiety were actually people that experienced anxiety in many areas of their lives, and therefore, library anxiety was not a special, separate phenomena needing condition specific solutions. One hundred and fifteen graduate students enrolled in a research methods class participated in this study. They completed the Library Anxiety Scale (LAS) developed by Bostick (1992) and the State-Trait Anxiety Inventory (STAI) developed by Spielberger, Gorsuch, and Luchene (Jiao and Onwuegbuzie, 1999a). Both are Likert-format scales. The Pearson's product-moment correlation coefficient was used to discover if any correlation between library anxiety and trait anxiety existed. They found that no correlation existed. From this, the researchers concluded that library anxiety is a state of anxiety

specifically in response to the need to use a library and not part of a generalized anxiety state (Jiao and Onwuegbuzie, 1999a).

A number of studies have been conducted to determine if any particular factor is of a significant degree of difference from other factors involved in library anxiety. One such study was carried out by Onwuegbuzie (1997a) in an Arkansas university. Onwuegbuzie used Bostick's LAS to discover which area of LA occurred most frequently in this body of students. Because most of the students at this university were from rural public schools, he hypothesized that the mechanical barriers would be the biggest cause of LA. This was born out. LA due to mechanical barriers was significantly higher than that of the next highest source of LA, affective barriers (p.7).

Anne Fliotsos (1992) conducted a survey attempting to correlate LA with computer anxiety. Her findings supported the concept of computers being simply one source of possible anxiety connected with library use. The fear of looking incompetent while attempting to use computers or any other aspect of using the library was a significant source of LA. She suggests that this fear of appearing foolish is not limited to students, but also exists in academic faculty and staff members who may not have had the opportunity of remaining current with the changes technology has brought about in using the library for research.

Library anxiety is not unique to American students. Although most research concerning LA has been conducted in the United States, other countries have had similar findings concerning LA. Snunith Shoham and Diane Mizrachi (2001), both of Bar-Ilan University, Ramat Gan, Israel, conducted a study involving students from eight universities in Israel. They used the LAS developed by Bostick, but made several additional evaluations from the data. The major

difference concerned language skills. Eighty-two percent of those tested spoke Hebrew as their native language. Twelve percent spoke Arabic as their native language. Shoham and Mizrachi found that first year students had the least amount of LA associated with language. This level of anxiety increased significantly by the second year, as students realized the need to use English for their research. There was a slight rise in the third year students. A slight drop occurred in the fourth year. Language as a cause of LA was also found by Jiao, Onwuegbuzie, and Lichtenstein (1996).

A recurrent factor of LA is the reluctance of students to ask for help (Hernon and Pastine, 1977; Jiao and Onwuegbuzie, 1997; Mech and Brooks, 1995; Mellon, 1986; Shoham and Mizrachi, 2001; Swope and Katzer, 1972). Some students feel that asking for help is admitting failure (Keefer, 1993; and Dolman, 1996). Mary Jane Swope and Jeffrey Katzer constructed a questionnaire to use in a short interview to determine who had questions, who would or would not ask a librarian for help, and, if they would not ask, why they would not ask. Three areas of the library were chosen where people would be likely to have questions - the card catalog, the reference room indexes, and the open stacks. Of the people surveyed, forty-one percent had questions, but of these, only thirty-five percent would have asked for help. The reasons for not asking for help included dissatisfaction with past service, feelings that their questions were too simple, and not wanting to bother the librarians (1972).

## **Conclusion**

Jiao and Onwuegbuzie (1999a) state that each of the individual studies concerning library anxiety considered alone may not seem of great importance, but that when they are taken

together, it becomes quite clear that library anxiety is a problem for enough students that it must be taken seriously by librarians and other educators. They encourage further research for finding ways to help alleviate the problem (p281).

There are many aspects of this study that would bear further research. It would be of considerable interest to discover if faculty members experience LA because of the changes in technology as used in libraries. A content analysis of the many LA studies could be conducted to compare the results of the different researchers. From this, if any patterns or commonalities emerge, research should address the specific discoveries. Research could be done to discover what methods, if any, could be used to reduce the individual factors of LA.

This study assumes that the findings of the previous studies are valid and have established the existence of LA. This study will examine LA in two upper level groups of students by major. Previous studies have not addressed the possibility of differences in LA by the students' area of study. This could be done for many different major areas of study to determine if there are any differences in the feelings of the students according to their majors. If significant differences do exist between students in different majors, a study should be conducted to determine why such differences exist.



### **Chapter Three:**

#### **Methodology**

##### **Subjects**

Subjects for this study included students majoring in any physical education related area, and students majoring in history or history education. All students were enrolled at the University of West Alabama, Livingston, Alabama, during the semester, Spring 2003, in which the survey was administered. The University of West Alabama is a small college with a student body of approximately 2000 students. The student body is racially mixed consisting of approximately forty percent African-American students. Only those students having completed at least two years of college were asked to participate. The rationale for using only upper level and graduate students is that these students will have had more exposure to the library and are therefore less likely to experience and report the simple anxiety common to all people when experiencing new situations. Responses from freshmen and sophomores were discarded.

Eighteen history, two secondary education with an emphasis in history, and three social sciences comprehensive majors participated for a total of twenty-three students majoring in history related fields. Of these students, fourteen were male, four female, and five did not indicate their sex. Six responded that they had had a library instruction session; eight responded that they had not had a library instruction session; and nine did not indicate whether or not they had had a library instruction session. Three were graduate students, five seniors, four juniors, and eleven did not indicate their status.

One exercise science, one physical education, and twenty-two athletic training majors participated for a total of twenty-four students majoring in physical education related majors. Of these students, seven were male, six were female, and eleven did not indicate their sex. Eight had had a library instruction session; one had not had a library instruction session; and fifteen did not indicate whether or not they had had a library instruction session. Two were graduate students, four seniors, eight juniors, and ten did not indicate their status.

### **Setting**

Professors of appropriate class sections were contacted and asked to have their students participate. Three upper level physical education classes and four upper level history classes were visited.

### **Procedures**

The LAS was given at the beginning of the regular class period in each classroom. A copy of the LAS and a Scantron was given to all members of each class. No names were used either on the test or on the Scantron. Students will be asked to put their class standing and major on the Scantron. All Scantrons that indicate freshman or sophomore were discarded.

The answers on the Scantron were tabulated into charts by major and by factors. This information was then entered into Excel documents to migrate into the statistical package and to make the graphs.

One of the limitations of the LAS that was discovered while tabulating the results was the reversal of some positive and negative answers. This required the transposing of twelve of the questions in order to calculate accurate positive and negative feelings of the respondents. For example, while most of the questions were phrased in the negative, i.e. "The librarians are

unapproachable,” twelve questions were expressed in a positive manner, i.e. “I enjoy learning new things about the library.” In the first example, a strongly agree answer would be an indication of library anxiety occurring, but in the second example, a strongly agree would indicate a degree of comfort with the library. In order to correctly tabulate the responses, it was necessary to transpose the questions and responses (see chart).

### **Instrument**

The Library Anxiety Scale (LAS) developed by Sharon Bostick (1992) was used. This is a 43-item, five point Likert scale survey. This scale measures the five areas that are associated with library anxiety. High scores in each area have been found to be an indication of higher levels of library anxiety. This scale has been found to be reliable. “Reliability using Cronbach’s alpha indicated a coefficient of .83 for the 43 items.” (Bostick 1992, p.55).

A series of algorithms was performed for each factor for both groups. Using the factor values determined by Bostick, the levels and percentages were determined for each factor and group. T-test was run to determine if the difference between the mean of the two groups is statistically significant. If the .05 or -.05 level of significance is reached, it is concluded that a statistically significant difference exists. The t stat for the level of anxiety is -2.554; therefore the difference in the level of anxiety experienced by the two groups is statistically significant.

Some anxiety does exist in each group of students for each factor. In each of the five areas contributing to library anxiety, the physical education majors experienced more anxiety than the history majors. The highest degree of anxiety for both groups occurred with mechanical barriers. This factor also had the least difference between the two groups.

In constructing the charts of responses a trend seemed to be emerging showing a difference in the number of students having any opinion about the factors contributing to library anxiety. It was decided to run a t-test to determine if this was statistically significant. The t-stat level for this is 7.27, making it extremely significant.

## **Chapter Four**

### **Findings**

The hypothesis that physical education students experience library anxiety more frequently than history majors was shown by the results of this survey. The difference was shown to be of statistical significance by running a T-test. For each factor, the physical education majors did experience more anxiety than the history majors.

For Factor 1: Barriers with staff, only 4.15% of the history majors had a problem, compared to 16.72% of the physical education majors.

For Factor 2: Affective barriers, 18.38% of the history majors have a problem and 17.25% of the physical education majors have a problem. However, after applying the algorithm for the level value, the physical education students experience more anxiety in this area than the history students.

Factor 3: Comfort with the library, 10.87% of the history majors have a problem, and 20.32% of the physical education majors have a problem.

For Factor 4: Knowledge of the library, 12.50% of the history majors have a problem and 22.03% of the physical education majors have a problem.

For Factor 5: Mechanical barriers, 24.63% of the history majors have a problem and 25% of the physical education majors have a problem.

A surprising finding was the difference in the percentage of students with opinions between the history majors and the physical education majors. In every factor more history

students had an opinion than the physical education students. This is despite the fact that there is more library anxiety among the physical education majors than the history majors.

## **Chapter Five**

### **Conclusions**

#### **Limitations and suggestions for future study**

The small number of students available for sampling prevents this study from being truly representative of history and physical education students nationwide. To obtain a more accurate insight into the existence of library anxiety in different majors, additional studies of larger student bodies at different universities in different parts of the nation need to be conducted and compared.

The LAS itself should be re-evaluated and perhaps updated. Developed in 1992, the LAS does not adequately address the changes in computer technology that have occurred in libraries. A separate scale has been developed to measure computer anxiety, but because library research has become so dependant on the use of computer databases to find journal articles, it is possible that library anxiety is caused by fear of the computer and/or lack of knowledge in using the computer.

It is also possible that the LAS does not adequately address mechanical barrier issues. Only three questions in the survey address mechanical barriers. Many libraries now use a type of card system for printing. Using these cards and the associated equipment is a mechanical factor that should be addressed in a study of library anxiety. In a study by Onwuegbuzie (1997a) it was determined that mechanical barriers due to technology produced the highest levels of anxiety in the students surveyed. This was also found to be the case in this study. More attention needs to be given to this factor of library anxiety.

**Other suggestions for further research**

There have been many studies conducted about library anxiety, and its existence is well accepted. Some of these studies have made suggestions for dealing with the causes of anxiety and methods to employ in attempts to help students overcome their anxiety. Instead of studying the existence of library anxiety, research where steps are taken to alleviate anxiety needs to be done. Library anxiety could be measured in a large group of freshmen, then divide them into three groups. Two groups could receive different kinds of library instruction and the third group, as a control, receive no instruction. Two months after receiving the instruction the groups could be retested to determine if the methods of instruction made any difference in reducing the amounts of library anxiety still existing.

Universities and faculty must be aware that a significant portion of the students do experience some degree of library anxiety. For a person to receive the greatest benefit of their education, it is necessary to use the library. Steps should be taken to address each of the factors that create library anxiety in students. Instructors should incorporate library visits into their lesson plans. Many people feel anxiety about things with which they are not familiar. By forcing students into the library for assignments, one step in overcoming anxiety will have been taken. Libraries need to increase the amount of bibliographic instruction available to students. Efforts must be made by the library to create a user-friendly environment.

Information literacy is a popular topic at the modern university, but if students are inhibited from going to the library, they cannot become fully information literate. Education does not take place in a vacuum in an empty vessel. The whole person must be considered in order for learning to take place. Understanding and overcoming personal problems that interfere



with learning is part of what universities must do. Library anxiety is part of the personal aspect of learning that needs to be coped with.

Appendix one

**Charts**

## History students demography

<b>Sex</b>	
Male	14
Female	4
Did not indicate	5
<b>Had a library instruction session</b>	
Yes	6
No	8
Did not indicate	9
<b>Status</b>	
Graduate	3
Senior	5
Junior	4
Did not indicate	11
<b>Majors</b>	
History	18
Social science comprehensive	3
Secondary education with a concentration in history	2

## Physical education students demography

<b>Sex</b>	
Male	7
Female	6
Did not indicate	11
<b>Had a library instruction session</b>	
Yes	8
No	1
Did not indicate	15
<b>Status</b>	
Graduate	2
Senior	4
Junior	8
Did not indicate	10
<b>Majors</b>	
Athletic training	22
Exercise science	1
Physical education	1

## History majors results tabulated

1. I'm embarrassed that I don't know how to use the library.	12	9	0	2	0	23
2. A lot of the university is confusing to me.	9	10	3	1	0	23
3. The librarians are unapproachable.	7	10	5	1	0	23
4. The reference librarians are unhelpful.	5	11	6	1	0	23
5. The librarians don't have time to help me because they're always on the telephone.	4	12	6	1	0	23
6. I can't get help in the library at the times I need it.	5	13	4	1	0	23
7. Library clerks don't have time to help me.	5	14	4	0	0	23
8. The reference librarians don't have time to help me because they're always busy doing something else.	4	14	4	1	0	23
9. I am unsure about how to begin my research.	7	6	3	6	1	23
10. I get confused trying to find my way around the library.	6	11	1	3	2	23
11. I don't know what to do next when the book I need is not on the shelf.	6	8	2	6	1	23
12. The reference librarians are not approachable.	5	10	6	2	0	23
13. I enjoy learning new things about the library.	2	4	3	12	2	23
14. If I can't find a book on the shelf, the library staff will help me.	0	1	2	17	1	21
15. There is often no one available in the library to help me.	3	17	2	1	0	23
16. I feel comfortable using the library.	3	1	2	11	3	20
17. I feel like I'm bothering the reference librarian if I ask a question.	4	7	7	5	0	23
18. I feel safe in the library.	0	2	3	14	4	23
19. I feel comfortable in the library.	1	1	3	14	4	23
20. The reference librarians are unfriendly.	4	10	8	1	0	23
21. I can always ask a librarian if I don't know how to work a piece of equipment in the	0	1	5	12	5	23

library.						
22. The library is a comfortable place to study.	1	2	3	13	4	23
23. The library never has the material I need.	0	12	8	2	1	23
24. I can never find things in the library.	2	13	1	7	0	23
25. There is too much crime in the library.	9	6	7	0	1	23
26. The people who work at the circulation desk are helpful.	0	1	5	15	2	23
27. The library staff doesn't care about students.	3	12	8	0	0	23
28. The library is an important part of my school.	1	4	3	10	5	23
29. I want to learn to do my own research.	2	1	4	12	3	22
30. The copy machines are usually out of order.	2	6	10	4	1	23
31. I don't understand the library's overdue fines.	5	6	9	2	1	23
32. Good instructions for using the library's computers are available.	0	7	7	8	1	23
33. Librarians don't have time to help me.	3	13	7	0	0	23
34. The library's rules are too restrictive.	1	11	9	0	0	21
35. I don't feel physically safe in the library.	10	11	2	0	0	23
36. The computer printers are often out of paper.	0	6	10	4	3	23
37. The directions for using the computers are not clear.	5	10	5	3	0	23
38. I don't know what resources are available in the library.	3	10	5	5	0	23
39. The library staff doesn't listen to students.	2	10	10	1	0	23
40. The change machines are usually out of order.	0	7	11	2	3	23
41. The library is a safe place.	0	0	6	10	5	21
42. The library won't let me check out as many items as I need.	2	10	9	1	0	22
43. I can't find enough space in the library to study.	5	11	4	2	1	23
Totals	148	341	222	213	54	978

## Physical education majors results

1. I'm embarrassed that I don't know how to use the library.	10	9	4	1	0	24
2. A lot of the university is confusing to me.	8	9	3	3	1	24
3. The librarians are unapproachable.	2	11	7	4	0	24
4. The reference librarians are unhelpful.	2	7	12	3	0	24
5. The librarians don't have time to help me because they're always on the telephone.	1	8	12	3	0	24
6. I can't get help in the library at the times I need it.	2	11	9	2	0	24
7. Library clerks don't have time to help me.	2	9	11	2	0	24
8. The reference librarians don't have time to help me because they're always busy doing something else.	2	8	11	2	0	23
9. I am unsure about how to begin my research.	3	12	5	4	0	24
10. I get confused trying to find my way around the library.	2	10	6	6	0	24
11. I don't know what to do next when the book I need is not on the shelf.	3	11	7	3	0	24
12. The reference librarians are not approachable.	1	9	9	4	0	23
13. I enjoy learning new things about the library.	1	8	10	5	0	24
14. If I can't find a book on the shelf, the library staff will help me.	0	5	10	7	2	24
15. There is often no one available in the library to help me.	1	8	12	3	0	24
16. I feel comfortable using the library.	0	4	4	14	2	24
17. I feel like I'm bothering the reference librarian if I ask a question.	1	7	6	8	0	22
18. I feel safe in the library.	2	3	6	12	0	23
19. I feel comfortable in the library.	1	3	10	10	0	24
20. The reference librarians are unfriendly.	0	10	8	3	2	23

21. I can always ask a librarian if I don't know how to work a piece of equipment in the library.	0	5	7	10	2	24
22. The library is a comfortable place to study.	3	4	7	8	1	23
23. The library never has the material I need.	0	11	11	2	0	24
24. I can never find things in the library.	0	12	10	2	0	24
25. There is too much crime in the library.	2	6	11	2	2	23
26. The people who work at the circulation desk are helpful.	0	5	10	8	1	24
27. The library staff doesn't care about students.	1	7	11	5	0	24
28. The library is an important part of my school.	1	3	12	5	2	23
29. I want to learn to do my own research.	0	3	10	11	0	24
30. The copy machines are usually out of order.	0	7	10	6	1	24
31. I don't understand the library's overdue fines.	0	6	10	6	1	23
32. Good instructions for using the library's computers are available.	1	5	8	10	0	24
33. Librarians don't have time to help me.	0	7	14	3	0	24
34. The library's rules are too restrictive.	0	8	11	5	0	24
35. I don't feel physically safe in the library.	0	8	11	4	1	24
36. The computer printers are often out of paper.	0	9	11	3	1	24
37. The directions for using the computers are not clear.	0	7	10	7	0	24
38. I don't know what resources are available in the library.	1	8	10	5	0	24
39. The library staff doesn't listen to students.	0	8	10	6	0	24
40. The change machines are usually out of order.	0	5	12	7	0	24
41. The library is a safe place.	0	5	10	8	0	23
42. The library won't let me check out as many items as I need.	0	5	17	1	0	23
43. I can't find enough space in the library to study.	1	6	12	3	1	23
Totals	54	312	407	226	20	1019



## History Students, by factor, value level, and percentage

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Had Opinions	Level
0.8	33	3	13	7	0	0	69.57%	26.40
0.79	7	5	14	4	0	0	82.61%	25.28
0.77	8	1	14	4	1	0	82.61%	26.95
0.72	5	4	12	6	1	0	73.91%	23.76
0.72	39	2	10	10	1	0	56.52%	23.76
0.71	6	5	13	4	1	0	82.61%	23.43
0.7	12	5	10	6	2	0	73.91%	22.40
0.69	4	5	11	6	1	0	73.91%	21.39
0.63	3	7	10	5	1	0	78.26%	17.64
0.61	27	3	12	8	0	0	65.22%	19.52
0.6	14	1	17	2	1	0	91.30%	23.40
0.59	15	3	17	2	1	0	91.30%	23.01
0.55	21	5	12	5	1	0	78.26%	17.60
0.45	22	4	13	3	2	1	86.96%	17.55
0.41	34	1	11	9	0	0	60.87%	12.71
Factor 1							76.52%	21.65
0.8	38	3	10	5	5	0	78.26%	32.00
0.71	9	7	6	3	6	1	86.96%	26.27
0.66	10	6	11	1	3	2	95.65%	26.40
0.6	1	12	9	0	2	0	100.00%	14.40
0.59	2	9	10	3	1	0	86.96%	15.34
0.49	16	3	11	2	1	3	91.30%	19.11
0.46	37	5	10	5	3	0	78.26%	15.64
0.49	17	4	7	7	5	0	69.57%	17.64
0.45	24	2	13	1	7	0	95.65%	21.60
0.43	11	6	8	2	6	1	91.30%	17.20
0.35	43	5	11	4	2	1	82.61%	12.60
0.32	42	2	10	9	1	0	60.87%	10.24
Factor 2							84.78%	19.04
0.67	26	2	15	5	1	0	78.26%	25.46
0.64	18	4	14	3	2	0	86.96%	23.68
0.6	23	0	12	8	2	1	65.22%	25.20
0.53	20	4	10	8	1	0	65.22%	16.43
0.52	19	4	14	3	1	1	86.96%	19.76
0.52	31	5	6	9	2	1	60.87%	16.12
0.49	32	1	8	7	7	0	69.57%	21.56
0.4	25	9	6	7	0	1	69.57%	9.20
Factor 3							72.83%	19.68
0.79	29	3	12	4	1	2	82.61%	30.81
0.74	28	5	10	3	4	1	86.96%	28.86
0.67	41	5	10	6	0	0	73.91%	17.42
0.56	13	2	12	3	4	2	86.96%	26.32
0.53	35	10	11	2	0	0	91.30%	12.72
Factor 4							84.35%	23.23
0.75	36	0	6	10	4	3	56.52%	34.50
0.71	40	0	7	11	2	3	52.17%	30.53
0.67	30	2	6	10	4	1	56.52%	25.46
Factor 5							55.07%	30.16

**Physical Education Students, by factor, value level, and percentage**

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Had Opinions	Level
0.8	33	0	7	14	3	0	39.13%	29.60
0.79	7	2	9	11	2	0	52.17%	27.65
0.77	8	2	8	11	2	0	52.17%	25.41
0.72	5	1	8	12	3	0	47.83%	26.64
0.72	39	0	8	10	6	0	56.52%	31.68
0.71	6	2	11	9	2	0	60.87%	26.27
0.7	12	1	9	9	5	0	60.87%	29.40
0.69	4	2	7	12	3	0	47.83%	24.15
0.63	3	2	11	7	4	0	69.57%	25.83
0.61	27	1	7	11	5	0	52.17%	24.40
0.6	14	2	7	10	5	0	56.52%	23.40
0.59	15	1	8	12	3	0	47.83%	21.83
0.55	21	2	11	7	5	0	69.57%	24.20
0.45	22	1	8	7	4	3	69.57%	21.15
0.41	34	0	8	11	5	0	52.17%	17.22
Factor 1							55.65%	25.26
0.8	38	1	8	10	5	0	56.52%	32.80
0.71	9	3	12	5	4	0	78.26%	29.11
0.66	10	2	10	6	6	0	73.91%	29.04
0.6	1	10	9	4	1	0	82.61%	15.00
0.59	2	8	9	3	3	1	86.96%	20.06
0.49	16	2	14	4	4	0	82.61%	21.56
0.46	37	0	7	10	7	0	56.52%	20.70
0.49	17	1	7	6	8	0	73.91%	21.56
0.45	24	0	12	10	2	0	56.52%	18.00
0.43	11	3	11	7	3	0	69.57%	16.34
0.35	43	1	6	12	3	1	47.83%	12.95
0.32	42	0	5	17	1	0	26.09%	9.60
Factor 2							65.94%	20.56
0.67	26	0	12	6	3	2	73.91%	31.49
0.64	18	0	12	6	3	2	73.91%	30.08
0.6	23	0	11	11	2	0	52.17%	23.40
0.53	20	0	10	8	3	2	65.22%	23.85
0.52	19	0	10	10	3	1	56.52%	22.36
0.52	31	0	6	10	6	1	56.52%	22.88
0.49	32	0	10	8	5	1	65.22%	23.03
0.4	25	2	6	11	2	2	52.17%	14.80
Factor 3							61.96%	23.99
0.79	29	0	11	10	3	0	56.52%	32.39
0.74	28	2	5	12	3	1	47.83%	25.90
0.67	41	0	8	10	5	0	56.52%	27.47
0.56	13	0	5	10	8	1	56.52%	26.88
0.53	35	0	8	11	4	1	52.17%	22.79
Factor 4							53.91%	27.09
0.75	36	0	9	11	3	1	52.17%	31.50
0.71	40	0	5	12	7	0	47.83%	30.53
0.67	30	0	7	10	6	1	56.52%	30.82
Factor 5							52.17%	30.95

Factor Value	Statement #	Had Opinions		Level	
		History Students	PE Students	History Students	PE Students
0.8	33	69.57%	39.13%	26.40	29.60
0.79	7	82.61%	52.17%	25.28	27.65
0.77	8	82.61%	52.17%	26.95	25.41
0.72	5	73.91%	47.83%	23.76	26.64
0.72	39	56.52%	56.52%	23.76	31.68
0.71	6	82.61%	60.87%	23.43	26.27
0.7	12	73.91%	60.87%	22.40	29.40
0.69	4	73.91%	47.83%	21.39	24.15
0.63	3	78.26%	69.57%	17.64	25.83
0.61	27	65.22%	52.17%	19.52	24.40
0.6	14	91.30%	56.52%	23.40	23.40
0.59	15	91.30%	47.83%	23.01	21.83
0.55	21	78.26%	69.57%	17.60	24.20
0.45	22	86.96%	69.57%	17.55	21.15
0.41	34	60.87%	52.17%	12.71	17.22
<b>AVG</b>	<b>Factor 1</b>	<b>76.52%</b>	<b>55.65%</b>	<b>21.65</b>	<b>25.26</b>
0.8	38	78.26%	56.52%	32.00	32.80
0.71	9	86.96%	78.26%	26.27	29.11
0.66	10	95.65%	73.91%	26.40	29.04
0.6	1	100.00%	82.61%	14.40	15.00
0.59	2	86.96%	86.96%	15.34	20.06
0.49	16	91.30%	82.61%	19.11	21.56
0.46	37	78.26%	56.52%	15.64	20.70
0.49	17	69.57%	73.91%	17.64	21.56
0.45	24	95.65%	56.52%	21.60	18.00
0.43	11	91.30%	69.57%	17.20	16.34
0.35	43	82.61%	47.83%	12.60	12.95
0.32	42	60.87%	26.09%	10.24	9.60
<b>AVG</b>	<b>Factor 2</b>	<b>84.78%</b>	<b>65.94%</b>	<b>19.04</b>	<b>20.56</b>
0.67	26	78.26%	73.91%	25.46	31.49
0.64	18	86.96%	73.91%	23.68	30.08
0.6	23	65.22%	52.17%	25.20	23.40
0.53	20	65.22%	65.22%	16.43	23.85
0.52	19	86.96%	56.52%	19.76	22.36
0.52	31	60.87%	56.52%	16.12	22.88
0.49	32	69.57%	65.22%	21.56	23.03
0.4	25	69.57%	52.17%	9.20	14.80
<b>AVG</b>	<b>Factor 3</b>	<b>72.83%</b>	<b>61.96%</b>	<b>19.68</b>	<b>23.99</b>
0.79	29	82.61%	56.52%	30.81	32.39
0.74	28	86.96%	47.83%	28.86	25.90
0.67	41	73.91%	56.52%	17.42	27.47
0.56	13	86.96%	56.52%	26.32	26.88
0.53	35	91.30%	52.17%	12.72	22.79
<b>AVG</b>	<b>Factor 4</b>	<b>84.35%</b>	<b>53.91%</b>	<b>23.23</b>	<b>27.09</b>
0.75	36	56.52%	52.17%	34.50	31.50
0.71	40	52.17%	47.83%	30.53	30.53
0.67	30	56.52%	56.52%	25.46	30.82
<b>AVG</b>	<b>Factor 5</b>	<b>55.07%</b>	<b>52.17%</b>	<b>30.16</b>	<b>30.95</b>

**T-Test results**

Levels of Anxiety

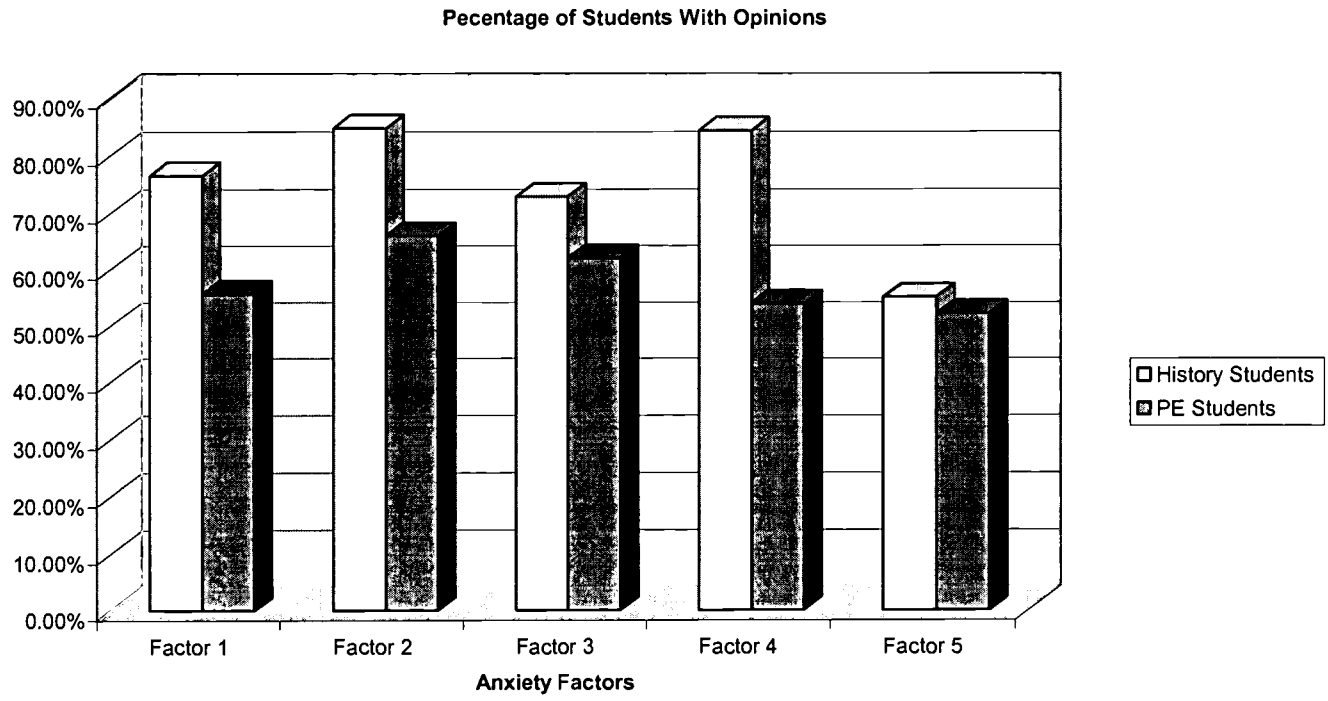
t-Test: Two-Sample Assuming Equal Variances

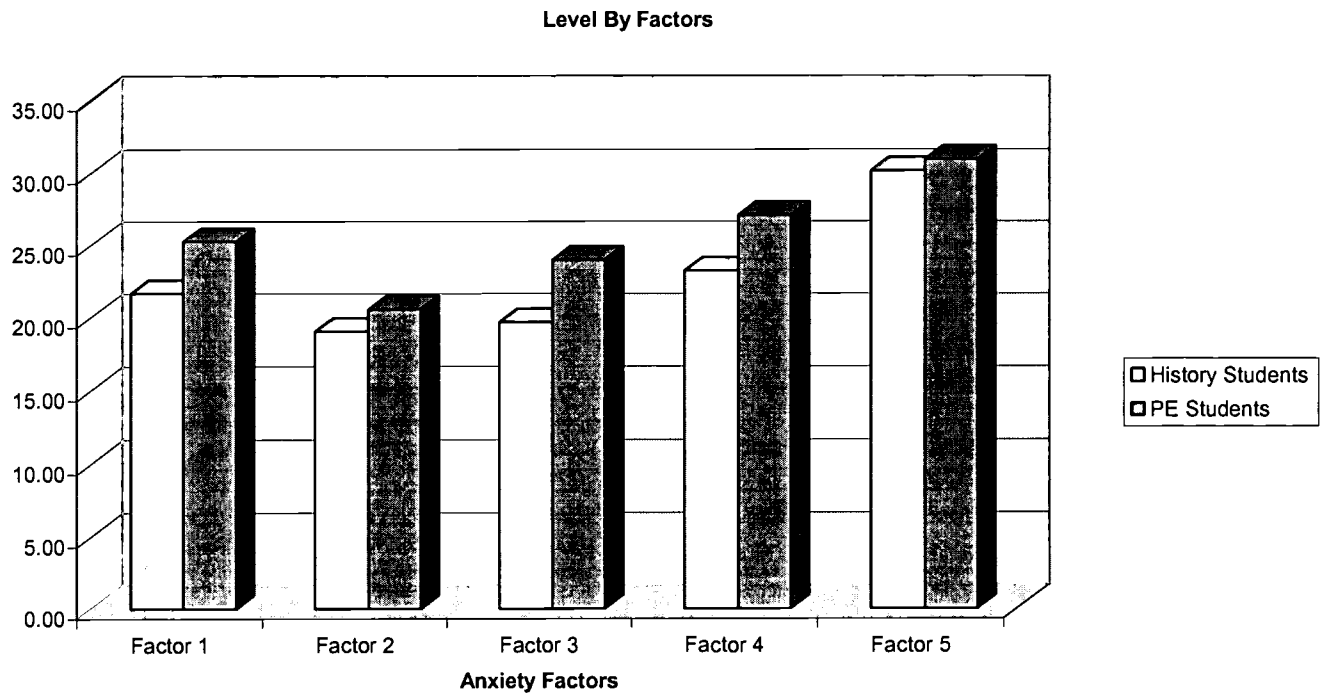
	26.4	29.6
Mean	21.37501241	24.33952305
Variance	34.13484516	29.14599086
Observations	47	47
Pooled Variance	31.64041801	
Hypothesized Mean Difference	0	
df	92	
t Stat	-2.554852536	
P(T<=t) one-tail	0.006132551	
t Critical one-tail	1.661585429	
P(T<=t) two-tail	0.012265101	
t Critical two-tail	1.986086318	

Percentage of Students with Opinions

t-Test: Two-Sample Assuming Equal Variances

	0.695652174	0.391304348
Mean	0.774205982	0.595390071
Variance	0.015189508	0.013233414
Observations	47	47
Pooled Variance	0.014211461	
Hypothesized Mean Difference	0	
df	92	
t Stat	7.271445083	
P(T<=t) one-tail	5.72397E-11	
t Critical one-tail	1.661585429	
P(T<=t) two-tail	1.14479E-10	
t Critical two-tail	1.986086318	





## History majors, Factor 1: Barriers with staff

Factor Value	State ment #	Statement	A	B	C	D	E
.080	33	Librarians don't have time to help me.	3	13	7	0	0
.79	7	Library clerks don't have time to help me.	5	14	4	0	0
.77	8	The reference librarians don't have time to help me, because they are always busy doing something else.	1	14	4	1	0
.72	5	The librarians don't have time to help me because they are always on the telephone.	4	12	6	1	0
.72	39	The library staff doesn't listen to students.	2	10	10	1	0
.71	6	I can't get help in the library at the times that I need it.	5	13	4	1	0
.70	12	The reference librarians are not approachable.	5	10	6	2	0
.69	4	The reference librarians are unhelpful.	5	11	6	1	0
.63	3	The librarians are not approachable.	7	10	5	1	0
.61	27	The library staff doesn't care about students.	3	12	8	0	0
.60	14	If I can't find a book on the shelf, the library staff will help me.	0	1	2	17	1
.59	15	There is often no one available in the library to help me.	3	17	2	1	0
.55	21	I can always ask a librarian if I don't know how to work a piece of equipment in the library.	0	1	5	12	5
.45	22	The library is a comfortable place to study.	1	2	3	13	4
.41	34	The library's rules are too restrictive.	1	11	9	0	0

**Physical education majors, Factor 1: Barriers with staff**

Factor Value	Statement #	Statement	A	B	C	D	E
.080	33	Librarians don't have time to help me.	0	7	14	3	0
.79	7	Library clerks don't have time to help me.	2	9	11	2	0
.77	8	The reference librarians don't have time to help me, because they are always busy doing something else.	2	8	11	2	0
.72	5	The librarians don't have time to help me because they are always on the telephone.	1	8	12	3	0
.72	39	The library staff doesn't listen to students.	0	8	10	6	0
.71	6	I can't get help in the library at the times that I need it.	2	11	9	2	0
.70	12	The reference librarians are not approachable.	1	9	9	5	0
.69	4	The reference librarians are unhelpful.	2	7	12	3	0
.63	3	The librarians are not approachable.	2	11	7	4	0
.61	27	The library staff doesn't care about students.	1	7	11	5	0
.60	14	If I can't find a book on the shelf, the library staff will help me.	0	5	10	7	2
.59	15	There is often no one available in the library to help me.	1	8	12	3	0
.55	21	I can always ask a librarian if I don't know how to work a piece of equipment in the library.	0	5	7	11	2
.45	22	The library is a comfortable place to study.	3	4	7	8	1
.41	34	The library's rules are too restrictive.	0	8	11	5	0



## History Majors, Factor 2: Affective barriers

Factor Value	Statement #	Statement	A	B	C	D	E
.80	38	I don't know what resources are available in the library.	3	10	5	5	0
.71	9	I am unsure about how to begin my research.	7	6	3	6	1
.66	10	I get confused trying to find my way around the library.	6	11	1	3	2
.60	1	I'm embarrassed that I don't know how to use the library.	12	9	0	2	0
.59	2	A lot of the university is confusing to me.	9	10	3	1	0
.49	16	I feel comfortable using the library.	3	1	2	11	3
.46	37	The directions for using the computers are not clear.	5	10	5	3	0
.49	17	I feel like I'm bothering the reference librarian if I ask a question.	4	7	7	5	0
.45	24	I can never find things in the library/	2	13	1	7	0
.43	11	I don't know what to do next when the book I need is not on the shelf.	6	8	2	6	1
.35	43	I can't find enough space in the library to study.	5	11	4	2	1
.32	42	The library won't let me check out as many items as I need.	2	10	9	1	0

**Physical Education Majors, Factor 2: Affective barriers**

<b>Factor Value</b>	<b>Statement #</b>	<b>Statement</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
.80	38	I don't know what resources are available in the library.	1	8	10	5	0
.71	9	I am unsure about how to begin my research.	3	12	5	4	0
.66	10	I get confused trying to find my way around the library.	2	10	6	6	0
.60	1	I'm embarrassed that I don't know how to use the library.	10	9	4	1	0
.59	2	A lot of the university is confusing to me.	8	9	3	3	1
.49	16	I feel comfortable using the library.	0	4	4	14	2
.46	37	The directions for using the computers are not clear.	0	7	10	7	0
.49	17	I feel like I'm bothering the reference librarian if I ask a question.	1	7	6	8	0
.45	24	I can never find things in the library/	0	12	10	2	0
.43	11	I don't know what to do next when the book I need is not on the shelf.	3	11	7	3	0
.35	43	I can't find enough space in the library to study.	1	6	12	3	1
.32	42	The library won't let me check out as many items as I need.	0	5	17	1	0

## History majors, Factor 3: Comfort with the library

Factor Value	Statement #	Statement	A	B	C	D	E
.67	26	The people who work at the circulation desk are helpful.	0	1	5	15	2
.64	18	I feel safe in the library.	0	2	3	14	4
.60	23	The library never has the materials I need.	0	12	8	2	1
.53	20	The reference librarians are unfriendly.	4	10	8	1	0
.52	19	I feel comfortable in the library.	1	1	3	14	4
.52	31	I don't understand the library's overdue fines.	5	6	9	2	1
.49	32	Good instructions for using the library's computers are available.	0	7	7	8	1
.40	25	There is too much crime in the library.	9	6	7	0	1

**Physical Education majors, Factor 3: Comfort with the library**

<b>Factor Value</b>	<b>Statement #</b>	<b>Statement</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
.67	26	The people who work at the circulation desk are helpful.	2	3	6	12	0
.64	18	I feel safe in the library.	2	3	6	12	0
.60	23	The library never has the materials I need.	0	11	11	2	0
.53	20	The reference librarians are unfriendly.	0	10	8	3	2
.52	19	I feel comfortable in the library.	1	3	10	10	0
.52	31	I don't understand the library's overdue fines.	0	6	10	6	1
.49	32	Good instructions for using the library's computers are available.	1	5	8	10	0
.40	25	There is too much crime in the library.	2	6	11	2	2

**History majors, Factor 4: Knowledge of the library**

<b>Factor Value</b>	<b>Statement #</b>	<b>Statement</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
.79	29	I want to learn to do my own research.	2	1	4	12	3
.74	28	The library is an important part of my school.	1	4	3	10	5
.67	41	The library is a safe place.	0	0	6	10	5
.56	13	I enjoy learning new things about the library.	2	4	3	12	2
.53	35	I don't feel physically safe in the library.	10	11	2	0	0

**History majors, Factor 5: Mechanical barriers**

<b>Factor Value</b>	<b>Statement #</b>	<b>Statement</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
.75	36	The computer printers are often out of paper.	0	6	10	4	3
.71	40	The change machines are usually out of order.	0	7	11	2	3
.67	30	The copy machines are usually out of order.	2	6	10	4	1

**Physical education majors, Factor 4: Knowledge of the library**

<b>Factor Value</b>	<b>Statement #</b>	<b>Statement</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
.79	29	I want to learn to do my own research.	0	3	10	11	0
.74	28	The library is an important part of my school.	1	3	12	5	2
.67	41	The library is a safe place.	0	5	10	8	0
.56	13	I enjoy learning new things about the library.	1	8	10	5	0
.53	35	I don't feel physically safe in the library.	0	8	11	4	1

**Physical education majors, Factor 5: Mechanical barriers**

<b>Factor Value</b>	<b>Statement #</b>	<b>Statement</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
.75	36	The computer printers are often out of paper.	0	9	11	3	1
.71	40	The change machines are usually out of order.	0	5	12	7	0
.67	30	The copy machines are usually out of order.	0	7	10	6	1

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.8	33	3	13	7	0	0	23
0.79	7	5	14	4	0	0	23
0.77	8	1	14	4	1	0	20
0.72	5	4	12	6	1	0	23
0.72	39	2	10	10	1	0	23
0.71	6	5	13	4	1	0	23
0.7	12	5	10	6	2	0	23
0.69	4	5	11	6	1	0	23
0.63	3	7	10	5	1	0	23
0.61	27	3	12	8	0	0	23
0.6	14	1	17	2	1	0	21
0.59	15	3	17	2	1	0	23
0.55	21	5	12	5	1	0	23
0.45	22	4	13	3	2	1	23
0.41	34	1	11	9	0	0	21
	<b>Totals</b>	54	189	81	13	1	338
	<b>Percent</b>	15.98%	55.92%	23.96%	3.85%	0.30%	100.00%

**History majors, Factor 1: Barriers with staff**

Category	Percent
1	15.98%
2	55.92%
3	23.96%
4	3.85%
5	0.30%

Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
33	0	7	14	3	0	24
7	2	9	11	2	0	24
8	2	8	11	2	0	23
5	1	8	12	3	0	24
39	0	8	10	6	0	24
6	2	11	9	2	0	24
12	1	9	9	5	0	24
4	2	7	12	3	0	24
3	2	11	7	4	0	24
27	1	7	11	5	0	24
14	2	7	10	5	0	24
15	1	8	12	3	0	24
21	2	11	7	5	0	25
22	1	8	7	4	3	23
34	0	8	11	5	0	24
						0
<b>Totals</b>	19	127	153	57	3	359
<b>Percent</b>	5.29%	35.38%	42.62%	15.88%	0.84%	100.00%

**Physical education majors, Factor 1:  
Barriers with staff**

Response Category	Percent
1	5.29%
2	35.38%
3	42.62%
4	15.88%
5	0.84%



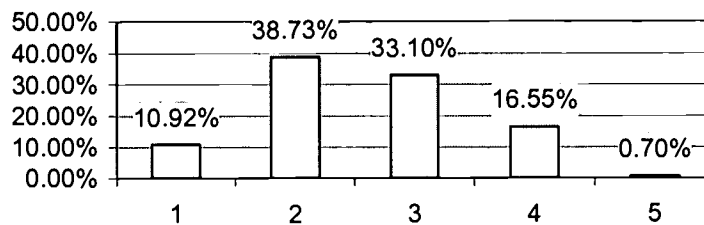
Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.8	38	3	10	5	5	0	23
0.71	9	7	6	3	6	1	23
0.66	10	6	11	1	3	2	23
0.6	1	12	9	0	2	0	23
0.59	2	9	10	3	1	0	23
0.49	16	3	11	2	1	3	20
0.46	37	5	10	5	3	0	23
0.49	17	4	7	7	5	0	23
0.45	24	2	13	1	7	0	23
0.43	11	6	8	2	6	1	23
0.35	43	5	11	4	2	1	23
0.32	42	2	10	9	1	0	22
	<b>Totals</b>	64	116	42	42	8	272
	<b>Percent</b>	23.53%	42.65%	15.44%	15.44%	2.94%	100.00%

**History majors, Factor 2: Affective barriers**

Category	Percent
1	23.53%
2	42.65%
3	15.44%
4	15.44%
5	2.94%

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.8	38	1	8	10	5	0	24
0.71	9	3	12	5	4	0	24
0.66	10	2	10	6	6	0	24
0.6	1	10	9	4	1	0	24
0.59	2	8	9	3	3	1	24
0.49	16	2	14	4	4	0	24
0.46	37	0	7	10	7	0	24
0.49	17	1	7	6	8	0	22
0.45	24	0	12	10	2	0	24
0.43	11	3	11	7	3	0	24
0.35	43	1	6	12	3	1	23
0.32	42	0	5	17	1	0	23
	<b>Totals</b>	31	110	94	47	2	284
	<b>Percent</b>	10.92%	38.73%	33.10%	16.55%	0.70%	100.00%

**Physical education majors, Factor 2:  
Affective barriers**



Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.67	26	2	15	5	1	0	23
0.64	18	4	14	3	2	0	23
0.6	23	0	12	8	2	1	23
0.53	20	4	10	8	1	0	23
0.52	19	4	14	3	1	1	23
0.52	31	5	6	9	2	1	23
0.49	32	1	8	7	7	0	23
0.4	25	9	6	7	0	1	23
	<b>Totals</b>	29	85	50	16	4	184
	<b>Percent</b>	15.76%	46.20%	27.17%	8.70%	2.17%	100.00%

**History majors, Factor 3: Comfort with the library**

Response Level	Percent
1	15.76%
2	46.20%
3	27.17%
4	8.70%
5	2.17%

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.67	26	0	12	6	3	2	23
0.64	18	0	12	6	3	2	23
0.6	23	0	11	11	2	0	24
0.53	20	0	10	8	3	2	23
0.52	19	0	10	10	3	1	24
0.52	31	0	6	10	6	1	23
0.49	32	0	10	8	5	1	24
0.4	25	2	6	11	2	2	23
Totals		2	77	70	27	11	187
Percent		1.07%	41.18%	37.43%	14.44%	5.88%	100.00%

**Ppyssical education majors, Factor 3:  
Comfort with the library**

Response Category	Percentage
1	1.07%
2	41.18%
3	37.43%
4	14.44%
5	5.88%

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.79	29	3	12	4	1	2	22
0.74	28	5	10	3	4	1	23
0.67	41	5	10	6	0	0	21
0.56	13	2	12	3	4	2	23
0.53	35	10	11	2	0	0	23
	<b>Totals</b>	25	55	18	9	5	112
	<b>Percent</b>	22.32%	49.11%	16.07%	8.04%	4.46%	100.00%

**History majors, Factor 4: Knowledge of the library**

Response Category	Percent
1	22.32%
2	49.11%
3	16.07%
4	8.04%
5	4.46%

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.79	29	0	11	10	3	0	24
0.74	28	2	5	12	3	1	23
0.67	41	0	8	10	5	0	23
0.56	13	0	5	10	8	1	24
0.53	35	0	8	11	4	1	24
	Totals	2	37	53	23	3	118
	Percent	1.69%	31.36%	44.92%	19.49%	2.54%	100.00%

[illegible]

Factor Value	Statement #	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Total responses
0.75	36	0	9	11	3	1	24
0.71	40	0	5	12	7	0	24
0.67	30	0	7	10	6	1	24
	Totals	0	21	33	16	2	72
	Percent	0.00%	29.17%	45.83%	22.22%	2.78%	100.00%

**Physical education majors, Factor 5:  
Mechanical barriers**

Category	Percentage
1	0.00%
2	29.17%
3	45.83%
4	22.22%
5	2.78%



## Appendix 2

### **Questions requiring transposition and the changes made**

**Questions requiring transposition and the changes made**

13. I enjoy learning new things about the library.

I *do not* enjoy learning new things about the library.

14. If I can't find a book on the shelf, the library staff will help me.

If I can't find a book on the shelf, the library staff will *not* help me.

16. I feel comfortable using the library.

I *do not* feel comfortable using the library.

18. I feel safe in the library.

I *do not* feel safe in the library.

19. I feel comfortable in the library.

I *do not* feel comfortable in the library.

21. I can always ask a librarian if I don't know how to work a piece of equipment in the library.

I *cannot* ask a librarian, if I don't know how to work a piece of equipment in the library.

22. The library is a comfortable place to study.

The library is *not* a comfortable place to study.

26. The people who work at the circulation desk are helpful.

The people who work at the circulation desk are *not* helpful.

28. The library is an important part of my school.

The library is *not* an important part of my school.

29. I want to learn to do my own research.

I *do not* want to learn to do my own research.

32. Good instructions for using the library's computers are available.

Good instructions for using the library's computers are *not* available.

41. The library is a safe place.

The library is *not* a safe place.

Appendix three

**Library Anxiety Scale**

Please do not put your name on the question or answer sheets. No connection will be made between any individual and the answers given on this survey.

In the space for your name, please put your major (physical education, athletic training, history, social studies, etc.) and your current educational status (freshman, sophomore, junior, senior, graduate student, continuing education student). In the next space, please put your birth year and gender.

Please answer the questions according to your feelings. There are no right or wrong answers for this survey. The intent is to discover how people feel about the library. If you have no feelings concerning an item mark "3 undecided." If your answer varies from one experience to another, please answer with the most frequent feelings.

Please use the following number scale:

<b>A= strongly disagree</b>	<b>B=disagree</b>	<b>C=undecided</b>	<b>D=agree</b>	<b>E=strongly agree</b>
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If you would like to make any comments, please write them on the back of your Scantron.

Thank you for your participation.

This survey was developed by Sharon Bostick, 1992.

<b>A=strongly disagree   B=disagree   C=undecided   D=agree   E=strongly agree</b>
--

44. I'm embarrassed that I don't know how to use the library.
45. A lot of the university is confusing to me.
46. The librarians are unapproachable.
47. The reference librarians are unhelpful.
48. The librarians don't have time to help me because they're always on the telephone.
49. I can't get help in the library at the times I need it.
50. Library clerks don't have time to help me.
51. The reference librarians don't have time to help me because they're always busy doing something else.
52. I am unsure about how to begin my research.
53. I get confused trying to find my way around the library.
54. I don't know what to do next when the book I need is not on the shelf.
55. The reference librarians are not approachable.
56. I enjoy learning new things about the library.
57. If I can't find a book on the shelf, the library staff will help me.
58. There is often no one available in the library to help me.
59. I feel comfortable using the library.
60. I feel like I'm bothering the reference librarian if I ask a question.
61. I feel safe in the library.
62. I feel comfortable in the library.
63. The reference librarians are unfriendly.
64. I can always ask a librarian if I don't know how to work a piece of equipment in the library.
65. The library is a comfortable place to study.

66. The library never has the material I need.
67. I can never find things in the library.
68. There is too much crime in the library.
69. The people who work at the circulation desk are helpful.
70. The library staff doesn't care about students.
71. The library is an important part of my school.
72. I want to learn to do my own research.
73. The copy machines are usually out of order.
74. I don't understand the library's overdue fines.
75. Good instructions for using the library's computers are available.
76. Librarians don't have time to help me.
77. The library's rules are too restrictive.
78. I don't feel physically safe in the library.
79. The computer printers are often out of paper.
80. The directions for using the computers are not clear.
81. I don't know what resources are available in the library.
82. The library staff doesn't listen to students.
83. The change machines are usually out of order.
84. The library is a safe place.
85. The library won't let me check out as many items as I need.
86. I can't find enough space in the library to study.

Library Anxiety Scale, Sharon L. Bostick, 1992.

Appendix four

**Factor Values by factor**

**Factor Values (Bostick, p.164-165)****Factor 1: Barriers with staff**

Factor Value	Statement #	Statement
.080	33	Librarians don't have time to help me.
.79	7	Library clerks don't have time to help me.
.77	8	The reference librarians don't have time to help me, because they are always busy doing something else.
.72	5	The librarians don't have time to help me because they are always on the telephone.
.72	39	The library staff doesn't listen to students.
.71	6	I can't get help in the library at the times that I need it.
.70	12	The reference librarians are not approachable.
.69	4	The reference librarians are unhelpful.
.63	3	The librarians are not approachable.
.61	27	The library staff doesn't care about students.
.60	14	If I can't find a book on the shelf, the library staff will help me.
.59	15	There is often no one available in the library to help me.
.55	21	I can always ask a librarian if I don't know how to work a piece of equipment in the library.
.45	22	The library is a comfortable place to study.
.41	34	The library's rules are too restrictive.

**Factor 2: Affective barriers**

Factor Value	Statement #	Statement
.80	38	I don't know what resources are available in the library.
.71	9	I am unsure about how to begin my research.
.66	10	I get confused trying to find my way around the library.
.60	1	I'm embarrassed that I don't know how to use the library.
.59	2	A lot of the university is confusing to me.
.49	16	I feel uncomfortable using the library.
.46	37	The directions for using the computers are not clear.
.49	17	I feel like I'm bothering the reference librarian if I ask a question.
.45	24	I can never find things in the library/
.43	11	I don't know what to do next when the book I need is not on the shelf.
.35	43	I can't find enough space in the library to study.
.32	42	The library won't let me check out as many items as I need.



## Factor 3: Comfort with the library

Factor Value	Statement #	Statement
.67	26	The people who work at the circulation desk are helpful.
.64	18	I feel safe in the library.
.60	23	The library never has the materials I need.
.53	20	The reference librarians are unfriendly.
.52	19	I feel comfortable in the library.
.52	31	I don't understand the library's overdue fines.
.49	32	Good instructions for using the library's computers are available.
.40	25	There is too much crime in the library.

## Factor 4: Knowledge of the library

Factor Value	Statement #	Statement
.79	29	I want to learn to do my own research.
.74	28	The library is an important part of my school.
.67	41	The library is a safe place.
.56	13	I enjoy learning new things about the library.
.53	35	I don't feel physically safe in the library.

## Factor 5: Mechanical barriers

Factor Value	Statement #	Statement
.75	36	The computer printers are often out of paper.
.71	40	The change machines are usually out of order.
.67	30	The copy machines are usually out of order.

## Appendix Five

### Letters

UNIVERSITY OF SOUTHERN MISSISSIPPI  
INFORMED CONSENT  
AUTHORIZATION TO PARTICIPATE IN A RESEARCH PROJECT

Subject's name \_\_\_\_\_

Consent is hereby given to participate in the research project entitled A Study of Library Anxiety in History and Physical Education Majors.

---

You are invited to participate in a study concerning library anxiety. We hope to learn what factors of library anxiety occur in students in different majors. You were selected to participate because no one has previously studied library anxiety in specific groups of students by majors.

**Explanation of Study:** A Library Anxiety Scale and a Scantron will be passed to each student. The test should require no more than ten minutes. It is important that you chose the answer that best describes your feelings.

**Confidentiality of Study:** Please do not include anything that could identify the survey data with you. Any data that can be identified with an individual will be deleted.

**Compensation:** No compensation will be provided for participation.

**Voluntary Participation:** Your decision to participate or not to participate will not prejudice your relations with The University of West Alabama. If you decide to participate, you may withdraw your consent and discontinue participation at any time.

**Questions Regarding Study:** If you have any questions regarding this study now or at any time during your participation, you may contact Ms. Joyce A. Brannan, Julia Tutwiler Library, University of West Alabama, 205-652-3677. Any questions or concerns about your rights as a research subject may be directed to the Institutional Review Board Office at (601) 266-6820, Box 5147, Hattiesburg, MS 39406-5147, or to the Research Oversight Committee (205) 652-3550, Station 18, Livingston, AL 35470.

**YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE.  
YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE,  
HAVING READ THE INFORMATION PROVIDED ABOVE.**

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time

\_\_\_\_\_  
Subject's Signature

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Investigator's Signature

**From:** Sharon Bostick [Sharon.Bostick@umb.edu]  
**Sent:** Thursday, March 28, 2002 9:34AM  
**To:** Brannan, Joyce A. Brannan  
**Subject:** RE: Library Anxiety Scale

Dear Joyce,

Yes, please send me a copy of your proposal. Thanks.

Sharon

-----Original Message-----

From: Brannan, Joyce A. [mailto:jbrannan@uwa.edu]  
Sent: Monday, March 25, 2002 12:31 PM  
To: Sharon Bostick  
Subject: Library Anxiety Scale

Dr. Bostick,

I am currently enrolled in the Master's of Library and Information Science program at the University of Southern Mississippi. I am in the process of developing a research project concerning library anxiety. I intend to compare library anxiety in physical education majors and history majors. We are a small university (total enrollment is usually about 2000 students) in the rural south.

I would like permission to use the Library Anxiety Scale that you developed. If you would like a copy of my proposal, I would be glad to send it to you. If you would like the results when I have completed my study, I will be glad to send that to you also.

Thank you very much.

Joyce Adams Brannan  
Technical Services Librarian  
Julia Tutwiler Library, Station 12  
University of West Alabama  
Livingston, Alabama 35470  
205.652.3677

Sharon Bostick  
Director of Libraries  
Healey Library  
University of Massachusetts, Boston  
617-287-5910  
[Sharon.Bostick@umb.edu](mailto:Sharon.Bostick@umb.edu)

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<i>St. 12</i>	E-Mail Address: <i>Jbrannan@UWA</i>	Date: <i>5 OCT 2003</i>
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